

ABSTRACT

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A method for making an optical composite composed of glass and plastic is disclosed. The method can be used to create a photochromic lens of high optical and refractive quality that is both scratch resistant and of high impact resistance. The method can also be used to create a strong sheath and/or cladding for an optic fiber. The method can also be used to create a scratch resistant coating for polycarbonate material, such as bulletproof glass. Vacuum pressure and optical contacting are used to hold the glass and plastic portions together. A flexible, peripheral seal, whose kinetic reaction strength has been enhanced with microwave radiation, is used maintain the vacuum adhesion of the glass and the plastic. This structural seal is located in a peripheral, non-optical portion of the optical composite to minimize any interference the seal may have with the optical function of the composite.